AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A method in a computer system for preventing atypical clinical events related to information identified by DNA testing a person, comprising the steps of:

receiving clinical agent information input by a clinician, the clinical agent information including an identifier of ~~the~~ a specific clinical agent;

determining if a gene is associated with the clinical agent information, and if so, obtaining a genetic test result value for the associated gene of the person;

comparing the genetic test result value to a list of one or more polymorphism values ~~associated with an atypical clinical event~~, the one or more polymorphism values having an association with one or more atypical clinical events and the one or more polymorphism values further having an association with the clinical agent; and

determining whether the genetic test result value correlates to one or more of the one or more~~a~~ polymorphism value~~s~~ on the list, and if so, outputting information about the one or more atypical clinical event~~s~~ associated with the one or more polymorphism value~~s~~.

2. (Original) The method of claim 1, wherein the clinical agent information includes a dosage of the identified clinical agent.

3. (Original) The method of claim 1, wherein the clinical agent information is received over a communication network from a remote computer.

4. (Original) The method of claim 1, wherein the step of determining if a gene is associated with the clinical agent information includes querying a first data structure containing agent-gene associations and determining if a gene has one or more variants associated with an atypical response to the identified clinical agent.

5. (currently amended) The method of claim 4, wherein the ~~a plurality of~~ genes ha~~s~~ve one or more variants associated with an atypical response to the identified clinical agent.

6. (Original) The method of claim 4, further comprising the step of initiating a clinical action if a gene has at least one variant associated with an atypical response to the identified clinical agent.

7. (Original) The method of claim 6, wherein the clinical action is providing a warning that the identified agent should not be administered.

8. (Withdrawn) The method of claim 6, wherein the clinical action is ordering a genetic test for the person.

9. (Withdrawn) The method of claim 6, wherein the clinical action is canceling another clinical action.

10. (currently amended) The method of claim 1, wherein obtaining a genetic test result value for the associated gene of the person comprises obtaining the genetic test result value ~~is obtained~~ from an electronic medical record of the person stored within a comprehensive healthcare system.

11. (currently amended) The method of claim 1, wherein the list of one or more polymorphism values is dynamically accumulated, and wherein the step of comparing includes querying a second ~~data structure~~list containing polymorphism-atypical result associations.

12. (currently amended) The method of claim 1, wherein the second ~~data structure~~list includes information about risks associated with the atypical clinical event.

13. (currently amended) The method of claim 12, wherein the step of outputting information includes accessing the risk information in the second ~~data structure~~list.

14. (currently amended) The method of claim 1, wherein the step of determining if a gene is associated with the clinical agent information includes querying a ~~first~~ data structure including a first data set and containing agent-gene associations and wherein the step of comparing includes querying the ~~a second~~ data structure including a second data set and containing polymorphism-atypical result associations~~, wherein the first data structure and second data structure are integrated as a single data structure~~.

15. (currently amended) The method of claim 1, wherein the output information includes a message containing a warning of a~~the~~ patient specific risk.

16. (Original) The method of claim 1, wherein the clinical agent information includes a dosage of the identified clinical agent, and wherein the second data structure includes information about risks associated with various dosages of the identified clinical agent.

17. (Withdrawn) The method of claim 1, further comprising the step of outputting information that the person is not at risk if the genetic test result value does not correlate to a polymorphism value.

18. (currently amended) A computer system for preventing atypical clinical events related to information identified by DNA testing a person, comprising:

a receiving component that receives clinical agent information input by a clinician, the clinical agent information including an identifier of ~~the~~ a specific clinical agent;

a first determining component that determines if a gene is associated with the clinical agent information;

an obtaining component for obtaining a genetic test result value for the associated gene of the person;

a comparing component for comparing the genetic test result value to a list of one or more polymorphism values ~~associated with an atypical clinical event~~, the one or more polymorphism values having an association with one or more atypical clinical events and the one or more polymorphism values further having an association with the clinical agent;

a second determining component that determines whether the genetic test result value correlates to ~~a~~ one or more of the one or more polymorphism values on the list, and

an outputting component that outputs information about the one or more atypical clinical events associated with the one or more polymorphism values.

19. (Original) The computer system of claim 18, wherein the clinical agent information includes a dosage of the identified clinical agent.

20. (Original) The computer system of claim 18, wherein the clinical agent information is received over a communication network from a remote computer.

21. (Original) The computer system of claim 18, wherein the first determining component includes a querying component that queries a first data structure containing agent-gene associations, and wherein the system further comprises a third determining component that determines if a gene has one or more variants associated with an atypical response to the identified clinical agent.

22. (currently amended) The computer system of claim 21, wherein the ~~a plurality of~~ gene~~s~~ has~~ve~~ one or more variants associated with an atypical response to the identified clinical agent.

23. (Original) The computer system of claim 21, further comprising an initiating component that initiates a clinical action if a gene has at least one variant associated with an atypical response to the identified clinical agent.

24. (Original) The computer system of claim 23, wherein the clinical action is providing a warning that the identified agent should not be administered.

25. (Withdrawn) The computer system of claim 23, wherein the clinical action is ordering a genetic test for the person.

26. (Withdrawn) The computer system of claim 23, wherein the clinical action is canceling another clinical action.

27. (currently amended) The computer system of claim 18, wherein the obtaining component is configured to obtain the genetic test result value ~~is obtained~~ from an electronic medical record of the person stored within a comprehensive healthcare system.

28. (currently amended) The computer system of claim 18, wherein the list of one or more polymorphism values is dynamically accumulated, and wherein the comparing component includes a querying component that queries a second ~~data structure~~list containing polymorphism-atypical result associations.

29. (currently amended) The computer system of claim 18, wherein the second ~~data structure~~list includes information about risks associated with the atypical clinical event.

30. (currently amended) The computer system of claim 29, wherein the outputting component includes an accessing component that accesses the risk information in the second ~~data structure~~list.

31. (currently amended) The computer system of claim 18, wherein the first determining component includes a querying component that queries a ~~first~~ data structure including a first data set and containing agent-gene associations and wherein the comparing component includes a second querying component that queries the ~~second~~ data structure including a second data set and containing polymorphism-atypical result associations~~, wherein the first data structure and second data structure are integrated as a single data structure~~.

32. (currently amended) The computer system of claim 18, wherein the output information includes a message containing a warning of a~~the~~ patient specific risk.

33. (Original) The computer system of claim 18, wherein the clinical agent information includes a dosage of the identified clinical agent, and wherein the second data structure includes information about risks associated with various dosages of the identified clinical agent.

34. (Withdrawn) The computer system of claim 18, further comprising a second outputting component that outputs information that the person is not at risk if the genetic test result value does not correlate to a polymorphism value.

35. (currently amended) A computer-readable medium containing instructions for controlling a computer system for preventing atypical clinical events related to information identified by DNA testing a person, by:

receiving clinical agent information input by a clinician, the clinical agent information including an identifier of ~~the~~ a specific clinical agent;

determining if a gene is associated with the clinical agent information, and if so, obtaining a genetic test result value for the associated gene of the person;

comparing the genetic test result value to a list of one or more polymorphism values ~~associated with an atypical clinical event~~, the one or more polymorphism values having an association with one or more atypical clinical events and the one or more polymorphism values further having an association with the clinical agent; and

determining whether the genetic test result value correlates to one or more of the one or more~~a~~ polymorphism value~~s~~ on the list, and if so, outputting information about the one or more atypical clinical event~~s~~ associated with the one or more polymorphism value~~s~~.

36. (Original) The computer-readable medium of claim 35, wherein the clinical agent information includes a dosage of the identified clinical agent.

37. (Original) The computer-readable medium of claim 35, wherein the clinical agent information is received over a communication network from a remote computer.

38. (Original) The computer-readable medium of claim 35, wherein the step of determining if a gene is associated with the clinical agent information includes querying a first data structure containing agent-gene associations and determining if a gene has one or more variants associated with an atypical response to the identified clinical agent.

39. (currently amended) The computer-readable medium of claim 38, wherein the ~~a plurality of~~ genes ha~~s~~ve one or more variants associated with an atypical response to the identified clinical agent.

40. (Original) The computer-readable medium of claim 38, further comprising the step of initiating a clinical action if a gene has at least one variant associated with an atypical response to the identified clinical agent information.

41. (Original) The computer-readable medium of claim 40, wherein the clinical action is providing a warning that the identified agent should not be administered.

42. (Withdrawn) The computer-readable medium of claim 40, wherein the clinical action is ordering a genetic test for the person.

43. (Withdrawn) The computer-readable medium of claim 40, wherein the clinical action is canceling another clinical action.

44. (currently amended) The computer-readable medium of claim 35, wherein obtaining a genetic test result value for the associated gene of the person comprises obtaining the genetic test result value ~~is obtained~~ from an electronic medical record of the person stored within a comprehensive healthcare system.

45. (currently amended) The computer-readable medium of claim 35, wherein the list of one or more polymorphism values is dynamically accumulated, and wherein the step of comparing includes querying a second ~~data structure~~list containing polymorphism-atypical result associations.

46. (currently amended) The computer-readable medium of claim 35, wherein the second ~~data structure~~list includes information about risks associated with the atypical clinical event.

47. (currently amended) The computer-readable medium of claim 46, wherein the step of outputting information includes accessing the risk information in the second ~~data structure~~list.

48. (currently amended) The computer-readable medium of claim 35, wherein the step of determining if a gene is associated with the clinical agent information includes querying a ~~first~~ data structure including a first data set and containing agent-gene associations and wherein the step of comparing includes querying the ~~a second~~ data structure including a second data set and containing polymorphism-atypical result associations~~, wherein the first data structure and second data structure are integrated as a single data structure~~.

49. (Original) The computer-readable medium of claim 35, wherein the output information includes a message containing a warning of a~~the~~ patient specific risk.

50. (Original) The computer-readable medium of claim 35, wherein the clinical agent information includes a dosage of the identified clinical agent, and wherein the second data structure includes information about risks associated with various dosages of the identified clinical agent.

51. (Withdrawn) The computer-readable medium of claim 35, further comprising the step of outputting information that the person is not at risk if the genetic test result value does not correlate to a polymorphism value.